

REMARKS

In the Office Action, claims 31-33 were objected to under 37 C.F.R. § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 35-37 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards the invention. Claims 1-3, 6, 7, 25, 26, 29, and 30 were rejected under 35 U.S.C. § 102(e) as being anticipated by Zhang et al., (U.S. Patent 6,762, 835, hereinafter "Zhang"). Claims 4, 5, 8-11, 27, 28, and 38-42 were objected to as being dependent upon a rejected base claim. By the present Response, claims 1, 25, 31, and 35-37 are amended. Upon entry of the amendments, claims 1-3, 4, 5, 6, 7, 8-11, 25, 26, 27, 28, 29, 30, 31-33, 35-37, and 38-42 will be pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

Claim objections due to informalities

In the Office Action, claims 31-33 were objected to due to certain informalities. Claim 31 is amended to obviate the objections raised in the Office Action. In particular, claim 31 is amended to depend from claim 25. No new matter has been added. Thus, reconsideration and allowance of the amended claims are requested.

Rejections Under 35 U.S.C. § 112

In the office Action, claims 35-37 were rejected under 37 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards the invention. Claims 35-37 are amended to depend from claim 25. Thus, reconsideration and allowance of amended claims are requested.

Rejections Under 35 U.S.C. § 102

Claims 1-3, 6, 7, 25, 26, 29, and 30 were rejected under 35 U.S.C. § 102(e) as being anticipated by Zhang.

Claim 1 and the claims depending therefrom

Claim 1 has been amended to recite an *in-situ* laser plasma spectroscopy (LPS) apparatus comprising a probe moveable with respect to a target and having a single focal lens for directing input laser energy from a main fiber to the target, and for directing laser induced plasma emission signals from the target to the main fiber. As set forth in the paragraph 0022 of the application, the probe further includes a stop such that an end thereof coincides with the focal point of the laser pulse exiting the lens. In field applications, a user may therefore position the probe in direct contact with the sample surface without regard to the position of the laser focal point.

With respect to Zhang, Figures 1 and 3 illustrate a flow meter connected via a valve provided to control the inlet flow of nitrogen. The outlet and inlet flows are adjusted so as to maintain the molten alloy surface at the focal plane of the focusing lens. The holder top includes a rotating ring, which provides fine adjustment of the distance between an output of the optical fiber and the collimating lens. Zhang fails to disclose a probe moveable with respect to a target as claimed. Indeed, Zhang adopts an opposite focus strategy, in which the flow of molten material is controlled to move the surface to the focal point of a fixed probe.

For the reasons summarized hereinabove, Applicants respectfully submit that the reference relied upon by the Examiner cannot support a *prima facie* case of anticipation of claim 1. Accordingly, Applicants respectfully submit that independent claim 1 and claims depending therefrom are allowable and respectfully request the Examiner to withdraw the rejection of the claims.

Claim 25 and the claims depending therefrom

Claim 25 has been amended to recite an *in-situ* laser plasma spectroscopy (LPS) apparatus comprising a probe moveable with respect to a target and having a single focal lens for directing input laser energy from a main fiber to the target, and for directing laser induced plasma emission signals from the target to the main fiber. Claim 25 further recites a beam splitter disposed within the enclosure.

Regarding Zhang, as noted above, this reference fails to disclose a probe moveable with respect to a target. Rather, the inlet and outlet flows of the gas are adjusted so as to locate the molten alloy surface at a focal plane of the focusing lens.

For the reasons summarized hereinabove, Applicants respectfully submit that the reference relied upon by the Examiner cannot support a *prima facie* case of anticipation of claim 25. Accordingly, Applicants respectfully submit that independent claim 25 and claims depending therefrom are allowable and respectfully request the Examiner to withdraw the rejection of the claims.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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